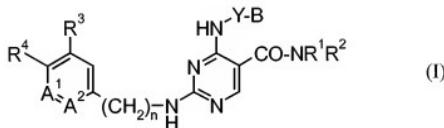


AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (previously presented) A compound represented by a formula (I) or a salt thereof,



wherein

A¹: CR⁵ or N,

R⁵: -H, -lower alkyl, -O-lower alkyl or -halogen,

A²: CR⁶ or N,

R⁶: -H or -halogen,

R³: -R⁰, -lower alkyl substituted with halogen, -halogen,

-OR⁰, -S-lower alkyl, -CO-lower alkyl, -CO₂-lower alkyl,

-lower alkylene-OH, -hetero ring, -O-hetero ring, -N(R⁰)-hetero ring, -lower alkylene-hetero ring, -O-lower alkylene-hetero ring, -S-lower alkylene-hetero ring, -SO-lower alkylene-hetero ring, -SO₂-lower alkylene-hetero ring, -N(R⁰)-lower alkylene-hetero ring, -lower alkylene-CO-hetero ring, -lower alkylene-N(R⁰)₂, -SO₂-N(R⁰)-lower alkyl or -lower alkylene-N(R⁰)-CO₂-lower alkylene-phenyl,

R⁰: the same or different from one another, and each is H or a lower alkyl,

n: 0 or 2,

R⁴: (i) when n = 2, -R⁰, -lower alkyl substituted with halogen, -OR⁰, -N(R⁰)-CHO, -N(R⁰)-CO-lower alkyl or -N(R⁰)-SO₂-lower alkyl,

(ii) when n = 0, -H, -lower alkyl substituted with halogen, -OH, -NH-CHO, -CON(R⁰)₂, -lower alkylene substituted with halogen-OH, -lower alkylene-NH₂, -lower alkylene-NHCONH₂, -lower alkylene-CO₂H, -lower alkylene-CO₂-lower alkyl, -lower alkylene-CN, or -CH(lower alkylene-OH)₂, or a group represented by a formula -X^a-R^{4a},

X^a: single bond, -O-, -CO-, -S-, -SO₂-, -N(R⁰)-, -N(R⁰)CO-, -N(R⁰)SO₂-, -lower alkylene-O-, -lower alkylene-N(R⁰)-, -lower alkylene-N(R⁰)CO-, -lower alkylene-N(R⁰)SO₂-, -lower alkylene-N(R⁰)CO₂-, -N(CO-R⁰)-, -N(SO₂-lower alkyl)-, -CON(R⁰)-, -lower alkylene-O-CO-, -lower alkenylene-CO-, -lower alkenylene-CON(R⁰)-, -lower alkenylene-CO₂-, -O-(CH₂)_k-cycloalkylene-(CH₂)_m-, -N(R⁰)-(CH₂)_k-cycloalkylene-(CH₂)_m-, -CO-(CH₂)_k-cycloalkylene-(CH₂)_m-, -CON(R⁰)-(CH₂)_k-cycloalkylene-(CH₂)_m- or -N(R⁰)CO-(CH₂)_k-cycloalkylene-(CH₂)_m-,

k and m, the same or different from each other, and each is 0, 1, 2, 3 or 4,

R^{4a}: lower alkyl, phenyl, hetero ring, cycloalkyl, lower alkylene-phenyl, lower alkylene-hetero ring, lower alkylene-OH, lower alkenyl, lower alkenylene-phenyl or lower alkenylene-hetero ring,

wherein the hetero rings in R³ and R^{4a} may be substituted with 1 to 5 of lower alkyl, halogen, -OR⁰, -S-lower alkyl, -S(O)-lower alkyl, -SO₂-lower alkyl, lower alkylene-OR⁰, -N(R⁰)₂, -CO₂R⁰, -CON(R⁰)₂, -CN, -CHO, -SO₂N(R⁰)₂, -N(R⁰)-SO₂-lower alkyl, -N(R⁰)-CO-N(R⁰)₂, -N(R⁰)-CO₂-lower alkyl, -N(R⁰)-CO₂-cycloalkyl, -NH-C(=NH)-NH-lower alkyl, -NH-C(=N-CN)-NH-lower alkyl, hetero ring (said hetero ring may be substituted with 1 to 5

substituents selected from lower alkyl, OH and lower alkylene-OH), -lower alkylene-NH-C(=NN)-NH₂, -O-phenyl, -CO-phenyl, -N(R⁰)-CO-lower alkyl, -N(R⁰)-CO-lower alkylene-N(R⁰)₂, -lower alkylene-N(R⁰)-CO-lower alkylene-N(R⁰)₂, -CO-N(R⁰)-lower alkylene-N(R⁰)₂, -CO-lower alkylene-N(R⁰)₂, -CO-lower alkylene-CO₂R⁰, -lower alkylene-N(R⁰)₂, -lower alkylene-CO₂R⁰, -lower alkylene-CO-N(R⁰)₂, -lower alkylene-N(R⁰)-CO-lower alkyl, -lower alkylene-N(R⁰)-CO₂-lower alkyl, -lower alkylene-N(R⁰)-SO₂-lower alkyl, -lower alkylene-hetero ring (said hetero ring may be substituted with 1 to 5 substituents selected from lower alkyl, OH and lower alkylene-OH), -lower alkylene-O-lower alkylene-phenyl, =N-O-R⁰ or oxo, and phenyl and cycloalkyl may be substituted with 1 to 5 of lower alkyl, OH, O-lower alkyl or N(R⁰)₂, and

wherein the lower alkylene in R³, R⁴, R^{4a} and X^a may be substituted with 1 to 5 of -OR⁰, -CO₂R⁰, -CON(R⁰)₂, -N(R⁰)₂, -N(R⁰)COR⁰ or hetero ring, or

R³ and R⁴ may together form *-N(R⁷)-(CH₂)₂-, *-(CH₂)₂-N(R⁷)-, *-CH₂-N(R⁷)-CH₂-, *-N(R⁷)-(CH₂)₃-, *-(CH₂)₃-N(R⁷)-, *-CH₂-N(R⁷)-(CH₂)₂-, *-(CH₂)₂-N(R⁷)-CH₂-, *-C(O)-N(R⁷)-(CH₂)₂-, *-(CH₂)₂-N(R⁷)-C(O)-, *-N(R⁷)-CH=CH-, *-CH=CH-N(R⁷)-, *-N=CH-CH=CH-, *-CH=N-CH=CH-, *-CH=CH-N=CH-, *-CH=CH-CH=N-, *-N=CH-CH=N-, *-CH=N-N=CH-, *-N(R⁷)-N=CH-, *-CH=N-N(R⁷)-, *-O-CH₂-O-, *-O-(CH₂)₂-O-, *-O-(CH₂)₃-O-, *-O-(CH₂)₂-N(R⁷)-, *-(CH₂)₂-C(O)-, *-CH=CH-C(O)-O- or *-N=C(CF₃)-NH-,

wherein * indicates bonding to the position shown by R³,

R⁷: -H, -lower alkyl or -CO-lower alkyl,

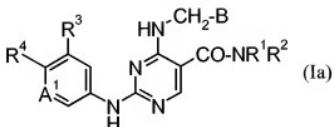
B: cycloalkyl which may have a substituent(s),

Y: single bond, and

R¹ and R²: the same or different from each other, and each represents H, lower alkyl or O-lower alkyl which may have a substituent(s)).

2. (canceled).

3. (previously presented) A compound represented by a formula (Ia) or a salt thereof,



wherein

A¹: CR⁵ or N,

R⁵: -H, -lower alkyl, -O-lower alkyl or -halogen,

R³: -R⁰, -lower alkyl substituted with halogen, -halogen,

-OR⁰, -S-lower alkyl, -CO-lower alkyl, -CO₂-lower alkyl,

-lower alkylene-OH, -saturated hetero ring, -X^b-heteroaryl, -X^b-saturated hetero ring, -X^b-heteroaryl, -lower alkylene-N(R⁰)₂, -SO₂-N(R⁰)-lower alkyl or -lower alkylene-N(R⁰)-CO₂-lower alkylene-phenyl,

X^b: -lower alkylene-, -O-lower alkylene-, -S-lower alkylene-, -SO-lower alkylene-, -SO₂-lower alkylene-, -N(R⁰)-lower alkylene- or -lower alkylene-CO-,

R⁰: the same or different from one another, and each represents H or a lower alkyl,

R⁴: -X^a-saturated hetero ring, -lower alkylene-saturated hetero ring or -lower alkenylene-saturated hetero ring,

X^a: single bond, -O-, -CO-, -S-, -SO₂-, -N(R⁰)-, -N(R⁰)CO-, -N(R⁰)SO₂-, -lower alkylene-O-, -lower alkylene-N(R⁰)-, -lower alkylene-N(R⁰)CO- or -lower alkylene-N(R⁰)SO₂-, -lower alkylene-N(R⁰)CO₂-, -N(CO-R⁰)-, -N(SO₂-lower alkyl)-, -CON(R⁰)-, -lower alkylene-O-CO-, -lower alkenylene-CO-, -lower alkenylene-CON(R⁰)-, -lower alkenylene-CO₂-, -O-(CH₂)_k-cycloalkylene-(CH₂)_m-, -N(R⁰)-(CH₂)_k-cycloalkylene-(CH₂)_m-, -CO-(CH₂)_k-cycloalkylene-(CH₂)_m-, -CON(R⁰)-(CH₂)_k-cycloalkylene-(CH₂)_m or -N(R⁰)CO-(CH₂)_k-cycloalkylene-(CH₂)_m,

k and m: the same or different from each other, and each is 0, 1, 2, 3 or 4,

wherein the saturated hetero rings in R³ and R⁴ may be substituted with 1 to 5 of lower alkyl, halogen, -OR⁰, -S-lower alkyl, -S(O)-lower alkyl, -SO₂-lower alkyl, lower alkylene-OR⁰, -N(R⁰)₂, -CO₂R⁰, -CON(R⁰)₂, -CN, -CHO, -SO₂N(R⁰)₂, -N(R⁰)-SO₂-lower alkyl, -N(R⁰)-CO-N(R⁰)₂, -N(R⁰)-CO₂-lower alkyl, -N(R⁰)-CO₂-cycloalkyl, -NH-C(=NH)-NH-lower alkyl, -NH-C(=N-CN)-NH-lower alkyl, saturated hetero ring (said hetero ring may be substituted with 1 to 5 substituents selected from lower alkyl, OH and lower alkylene-OH), heteroaryl, -lower alkylene-NH-C(=NN)-NH₂, -O-phenyl, -CO-phenyl, -N(R⁰)-CO-lower alkyl, -N(R⁰)-CO-lower alkylene-N(R⁰)₂, -lower alkylene-N(R⁰)-CO-lower alkylene-N(R⁰)₂, -CO-N(R⁰)-lower alkylene-N(R⁰)₂, -CO-lower alkylene-N(R⁰)₂, -CO-lower alkylene-CO₂R⁰, -lower alkylene-N(R⁰)₂, -lower alkylene-CO₂R⁰, -lower alkylene-CO-N(R⁰)₂, -lower alkylene-N(R⁰)-CO-lower alkyl, -lower alkylene-N(R⁰)-CO₂-lower alkyl, -lower alkylene-N(R⁰)-SO₂-lower alkyl, -lower alkylene-hetero ring (said hetero ring may be substituted with 1 to 5 substituents selected from lower alkyl, OH and lower alkylene-OH), -lower alkylene-O-lower alkylene-phenyl, =N-O-R⁰ or oxo, and phenyl and cycloalkyl may be substituted with 1 to 5 of lower alkyl, OH, O-lower alkyl or N(R⁰)₂, and

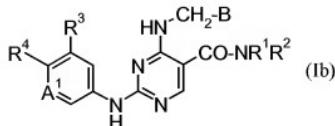
wherein the lower alkylene in R³, R⁴ and X^a may be substituted with 1 to 5 of -OR⁰, -CO₂R⁰, -CON(R⁰)₂, -N(R⁰)₂, -N(R⁰)COR⁰ or hetero ring, or
R³ and R⁴ may together form *-N(R⁷)-(CH₂)₂-, *-(CH₂)₂-N(R⁷)-, *-CH₂-N(R⁷)-CH₂-, *-N(R⁷)-(CH₂)₃-, *-(CH₂)₃-N(R⁷)-, *-CH₂-N(R⁷)-(CH₂)₂-, *-(CH₂)₂-N(R⁷)-CH₂-, *-C(O)-N(R⁷)-(CH₂)₂-, *-(CH₂)₂-N(R⁷)-C(O)-, *-N(R⁷)-CH=CH-, *-CH=CH-N(R⁷)-, *-N=CH-CH=CH-, *-CH=N-CH=CH-, *-CH=CH-N=CH-, *-CH=CH-CH=N-, *-N=CH-CH=N-, *-CH=N-N=CH-, *-N(R⁷)-N=CH-, *-CH=N-N(R⁷)-, *-O-CH₂-O-, *-O-(CH₂)₂-O-, *-O-(CH₂)₃-O-, *-O-(CH₂)₂-N(R⁷)-, *-(CH₂)₂-C(O)-, *-CH=CH-C(O)-O- or *-N=C(CF₃)-NH-, wherein * indicates bonding to the position shown by R³,

R⁷: -H, -lower alkyl or -CO-lower alkyl,

B: aryl which may have a substituent(s) or heteroaryl which may have a substituent(s), and

R¹ and R²: the same or different from each other, and each represents H, lower alkyl or O-lower alkyl which may have a substituent(s).

4. (previously presented) A compound represented by a formula (Ib) or a salt thereof,



wherein

A¹: CR⁵ or N,

R⁵: -H, -lower alkyl, -O-lower alkyl or -halogen,

R³: -saturated hetero ring or -X^b-saturated hetero ring,

X^b: -lower alkylene-, -O-, -N(R⁰)-, -O-lower alkylene-, -S-lower alkylene-, -SO-lower alkylene-, -SO₂-lower alkylene-, -N(R⁰)-lower alkylene- or -lower alkylene-CO-,

R⁰: the same or different from one another, and each represents H or a lower alkyl,

R⁴: -H, -lower alkyl substituted with halogen, -OH, -NH-CHO, -CON(R⁰)₂, -lower alkylene substituted with halogen-OH, -lower alkylene-NH₂, -lower alkylene-NHCONH₂, -lower alkylene-CO₂H, -lower alkylene-CO₂-lower alkyl, -lower alkylene-CN, -CH(lower alkylene-OH)₂ or -X^a-R^{4a},

X^a: single bond, -O-, -CO-, -S-, -SO₂-, -N(R⁰)-, -N(R⁰)CO-, -N(R⁰)SO₂-, -lower alkylene-O-, -lower alkylene-N(R⁰)-, -lower alkylene-N(R⁰)CO- or -lower alkylene-N(R⁰)SO₂-, -lower alkylene-N(R⁰)CO₂-, -N(CO-R⁰)-, -N(SO₂-lower alkyl)-, -CON(R⁰)-, -lower alkylene-O-CO-, -lower alkenylene-CO-, -lower alkenylene-CON(R⁰)-, -lower alkenylene-CO₂-, -O-(CH₂)_k-cycloalkylene-(CH₂)_m-, -N(R⁰)-(CH₂)_k-cycloalkylene-(CH₂)_m-, -CO-(CH₂)_k-cycloalkylene-(CH₂)_m-, -CON(R⁰)-(CH₂)_k-cycloalkylene-(CH₂)_m or -N(R⁰)CO-(CH₂)_k-cycloalkylene-(CH₂)_m-,

k and m: the same or different from each other, and each is 0, 1, 2, 3 or 4,

R^{4a}: lower alkyl, phenyl, heteroaryl, cycloalkyl, lower alkylene-phenyl, lower alkylene-heteroaryl, lower alkylene-OH, lower alkenyl, lower alkenylene-phenyl or lower alkenylene-heteroaryl,

wherein the saturated hetero ring and heteroaryl in R³ and R^{4a} may be substituted with 1 to 5 of lower alkyl, halogen, -OR⁰, -S-lower alkyl, -S(O)-lower alkyl, -SO₂-lower alkyl, lower alkylene-OR⁰, -N(R⁰)₂, -CO₂R⁰, -CON(R⁰)₂, -CN, -CHO, -SO₂N(R⁰)₂, -N(R⁰)-SO₂-lower alkyl, -

N(R⁰)-CO-N(R⁰)₂, -N(R⁰)-CO₂-lower alkyl, -N(R⁰)-CO₂-cycloalkyl, -NH-C(=NH)-NH-lower alkyl, -NH-C(=N-CN)-NH-lower alkyl, hetero ring (said hetero ring may be substituted with 1 to 5 substituents selected from lower alkyl, OH and lower alkylene-OH), -lower alkylene-NH-C(=NN)-NH₂, -O-phenyl, -CO-phenyl, -N(R⁰)-CO-lower alkyl, -N(R⁰)-CO-lower alkylene-N(R⁰)₂, -lower alkylene-N(R⁰)-CO-lower alkylene-N(R⁰)₂, -CO-N(R⁰)-lower alkylene-N(R⁰)₂, -CO-lower alkylene-N(R⁰)₂, -CO-lower alkylene-CO₂R⁰, -lower alkylene-N(R⁰)₂, -lower alkylene-CO₂R⁰, -lower alkylene-CO-N(R⁰)₂, -lower alkylene-N(R⁰)-CO-lower alkyl, -lower alkylene-N(R⁰)-CO₂-lower alkyl, -lower alkylene-N(R⁰)-SO₂-lower alkyl, -lower alkylene-hetero ring (said hetero ring may be substituted with 1 to 5 substituents selected from lower alkyl, OH and lower alkylene-OH), -lower alkylene-O-lower alkylene-phenyl, =N-O-R⁰ or oxo, and phenyl and cycloalkyl may be substituted with 1 to 5 of lower alkyl, OH, O-lower alkyl or N(R⁰)₂, or

the lower alkylene in R³, R⁴, R^{4a} and X^a may be substituted with 1 to 5 of -OR⁰, -CO₂R⁰, -CON(R⁰)₂, -N(R⁰)₂, -N(R⁰)COR⁰ or hetero ring, or

R³ and R⁴ may together form *-N(R⁷)-(CH₂)₂-, *-(CH₂)₂-N(R⁷)-, *-CH₂-N(R⁷)-CH₂-, *-N(R⁷)-(CH₂)₃-, *-(CH₂)₃-N(R⁷)-, *-CH₂-N(R⁷)-(CH₂)₂-, *-(CH₂)₂-N(R⁷)-CH₂-, *-C(O)-N(R⁷)-(CH₂)₂-, *-(CH₂)₂-N(R⁷)-C(O)-, *-N(R⁷)-CH=CH-, *-CH=CH-N(R⁷)-, *-N=CH-CH=CH-, *-CH=N-CH=CH-, *-CH=CH-N=CH-, *-CH=CH-CH=N-, *-N=CH-CH=N-, *-CH=N-N=CH-, *-N(R⁷)-N=CH-, *-CH=N-N(R⁷)-, *-O-CH₂-O-, *-O-(CH₂)₂-O-, *-O-(CH₂)₃-O-, *-O-(CH₂)₂-N(R⁷)-, *-(CH₂)₂-C(O)-, *-CH=CH-C(O)-O- or *-N=C(CF₃)-NH-, wherein * indicates bonding to the position shown by R³,

R⁷: -H, -lower alkyl or -CO-lower alkyl,

B: aryl which may have a substituent(s) or heteroaryl which may have a substituent(s),
and

R¹ and R²: the same or different from each other, and each represents H, lower alkyl or
O-lower alkyl which may have a substituent(s).

5. (canceled)

6. (previously presented) A compound selected from the group consisting of 4-benzylamino-2-[(4-morpholin-4-ylphenyl)amino]pyrimidine-5-carboxamide, 2-[(4-morpholin-4-ylphenyl)amino]-4-[(2,3,6-trifluorobenzyl)amino]pyrimidine-5-carboxamide, 4-[(2,5-difluorobenzyl)amino]-2-[(4-morpholin-4-ylphenyl)amino]pyrimidine-5-carboxamide, 4-[(2,6-difluorobenzyl)amino]-2-[(4-morpholin-4-ylphenyl)amino]pyrimidine-5-carboxamide, 4-[(2-methoxybenzyl)amino]-2-[(4-morpholin-4-ylphenyl)amino]pyrimidine-5-carboxamide, 4-[(2-fluoro-6-methoxybenzyl)amino]-2-[(4-morpholin-4-ylphenyl)amino]pyrimidine-5-carboxamide, 2-{{4-[(1-methylpiperidin-3-yl)oxy]phenyl}amino}-4-[(2,3,6-trifluorobenzyl)amino]pyrimidine-5-carboxamide, 2-{{4-(1-azabicyclo[2.2.2]oct-3-yloxy)phenyl}amino}-4-[(2,3,6-trifluorobenzyl)amino]pyrimidine-5-carboxamide, 2-{{4-(1-azabicyclo[2.2.2]oct-3-yloxy)phenyl}amino}-4-[(2,3,6-trifluorobenzyl)amino]pyrimidine-5-carboxamide, 2-[(4-methyl-3,4-dihydro-2H-1,4-benzoxazin-7-yl)amino]-4-[(2,3,6-trifluorobenzyl)amino]pyrimidine-5-carboxamide, 2-{{4-[4-(2-amino-2-oxoethyl)piperazin-1-yl]phenyl}amino}-4-[(2,3,6-trifluorobenzyl)amino]pyrimidine-5-carboxamide, 2-{{4-(2-morpholin-4-ylethoxy)phenyl}amino}-4-[(2,3,6-trifluorobenzyl)amino]pyrimidine-5-carboxamide, 2-{{4-(β-D-glucopyranosyloxy)phenyl}amino}-4-[(2,3,6-trifluorobenzyl)amino]pyrimidine-5-carboxamide, 4-benzylamino-2-{{2-(3-chloro-4-hydroxyphenyl)ethyl}amino}pyrimidine-5-carboxamide, 4-

benzylamino-2-{[2-(3,5-dichloro-4-hydroxyphenyl)ethyl]amino}pyrimidine-5-carboxamide, 2-[(4-morpholin-4-ylphenyl)amino]-4-[(2-thienylmethyl)amino]pyrimidine-5-carboxamide, 4-{[(3-chloro-2-thienyl)methyl]amino}-2-[(4-morpholin-4-ylphenyl)amino]pyrimidine-5-carboxamide and 2-{[3-(2-morpholin-4-ylethyl)phenyl]amino}-4-[(2,3,6-trifluorobenzyl)amino]pyrimidine-5-carboxamide or salts thereof.

7. (previously presented) A composition comprising a compound of any one of claims 1, 3 or 4, or a salt thereof, and a pharmaceutically acceptable carrier.

8 (canceled)

9. (previously presented) A method for treating asthma comprising administering an effective amount of a compound or a salt thereof, according to any one of claims 1, 3 or 4, to the subject, wherein the subject is a mammal.

10. (previously presented) A method for treating a chronic obstructive pulmonary disease (COPD) comprising administering an effective amount of a compound or a salt thereof, according to any one of claims 1, 3 or 4, to the subject, wherein the subject is a mammal.

Claims 11-14 (Canceled)

15. (previously presented) The compound of claim 1 wherein B is a cycloalkyl.

16. (previously presented) The compound of claim 15 wherein B is cyclopropyl or cyclobutyl which may have a substituent(s).
17. (previously presented) The compound of claim 16 wherein B is cyclopropyl or cyclobutyl.
18. (previously presented) The compound of claim 15 wherein R¹ and R² are both H.
19. (previously presented) The compound of claim 15 wherein A¹ is CR⁵ and A² is CR⁶, and wherein R⁵ and R⁶ are both H.
20. (previously presented) The compound of claim 15 wherein R³ is -R⁰, -halogen or -hetero ring, and wherein R⁰ is H or lower alkyl.
21. (previously presented) The compound of claim 20 wherein R³ is -hetero ring substituted with 1 to 5 of lower alkyl, -OH, -SO₂-lower alkyl, lower alkylene-OR⁰, -CO₂R⁰, -CON(R⁰)₂ or -N(R⁰)-CO-lower alkyl.
22. (previously presented) The compound of claim 15 wherein n is 0.

23. (previously presented) The compound of claim 22 wherein R⁴ is -X^a-R^{4a}, and wherein X^a is a single bond, -CO-, -SO₂-, -N(R⁰)CO- or -N(R⁰)SO₂-, and R^{4a} is lower alkyl, phenyl, hetero ring, cycloalkyl or lower alkylene-OH.
24. (previously presented) The compound of claim 23 wherein R^{4a} is hetero ring substituted with 1 to 5 of lower alkyl, -OH, -SO₂-lower alkyl, lower alkylene-OR⁰, -CO₂R⁰, -CON(R⁰)₂ or -N(R⁰)-CO-lower alkyl.
25. (previously presented) The compound of claim 15 wherein R³ and R⁴ taken together form *-N(R⁷)-CH=CH-, *-N(R⁷)-N=CH- or *-CH=N-N(R⁷)-, wherein * indicates bonding to the position shown by R³.